

Supplier Diversity & Current Initiatives

November 29, 2017



Agenda

- General Company Information
- Defining Diverse and Local Suppliers
- Diverse and Local Trends and Goals
- Unmanned Aircraft Systems
- Advanced Grid Infrastructure
- Cyber Security
- Renewable Development
- Questions

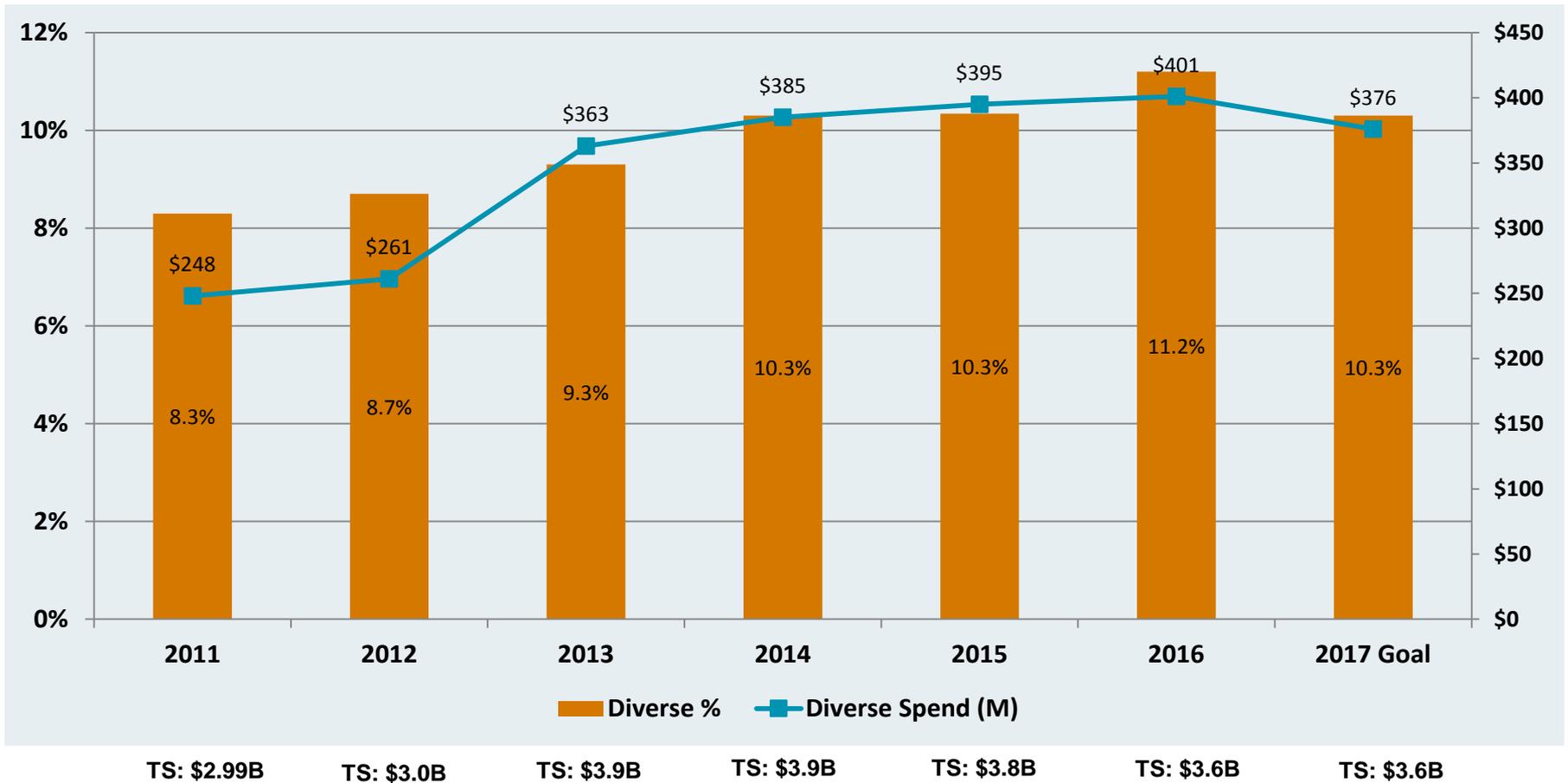
General Company Information

- States Served – Colorado, Minnesota, New Mexico, North Dakota, South Dakota, Texas, Michigan and Wisconsin
- Customers – 3.6 million electric customers, 2 million gas customers
- Total Revenue - \$11.1 billion
- Earnings - \$1.1 billion
- Generation Capacity – 17,400 MWs of owned capacity
- Employees – 12,000

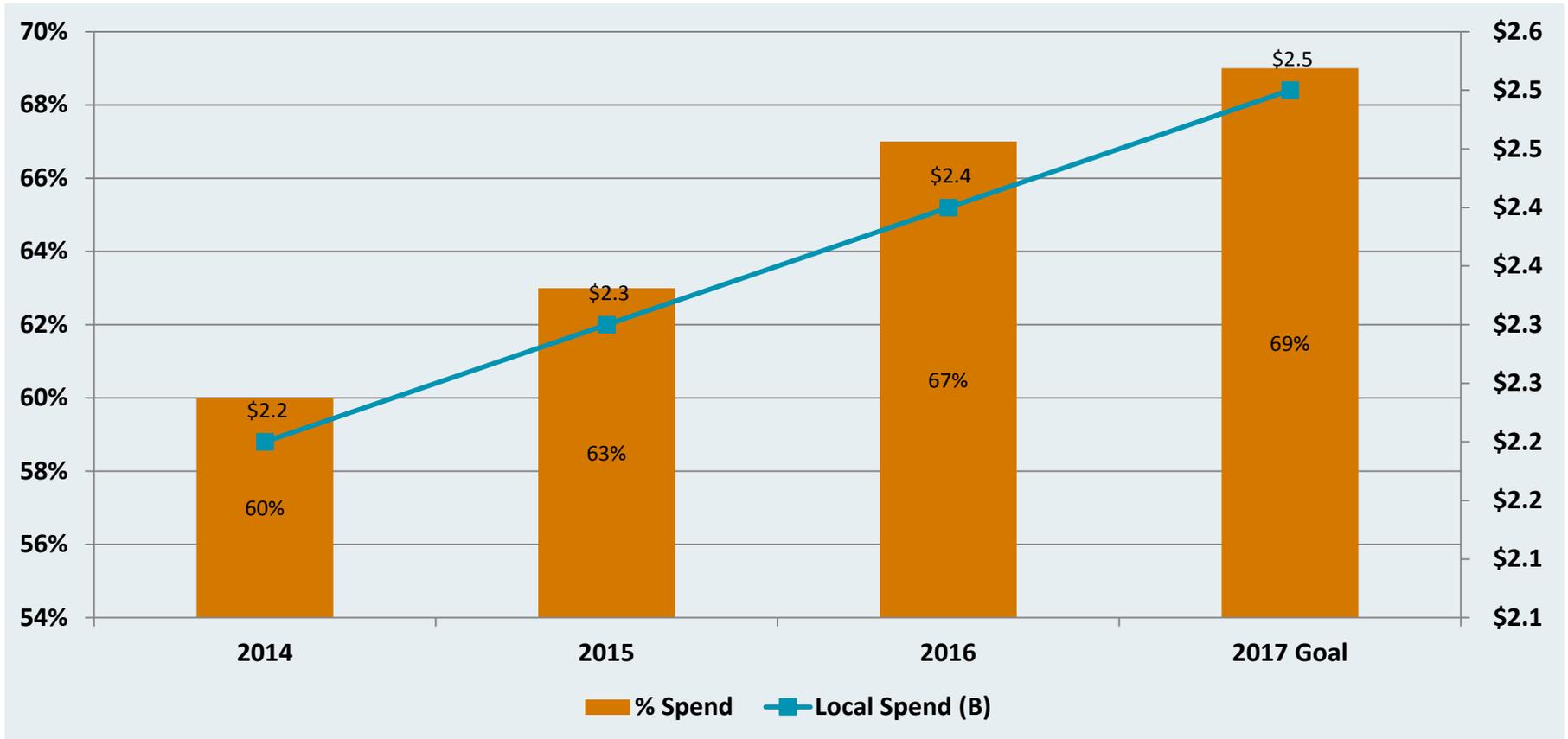
Diverse and Local Defined

- Diverse Suppliers
 - Class definitions: Women Owned; Minority Owned; Veteran or Service-Disabled Veteran Owned; HUBZone Business; Disadvantaged Business
 - In 2018 will include GLBT Owned Businesses
- Local Suppliers
 - Remit to address
 - Companies with large offices in our service territories used to specifically serve Xcel Energy facilities

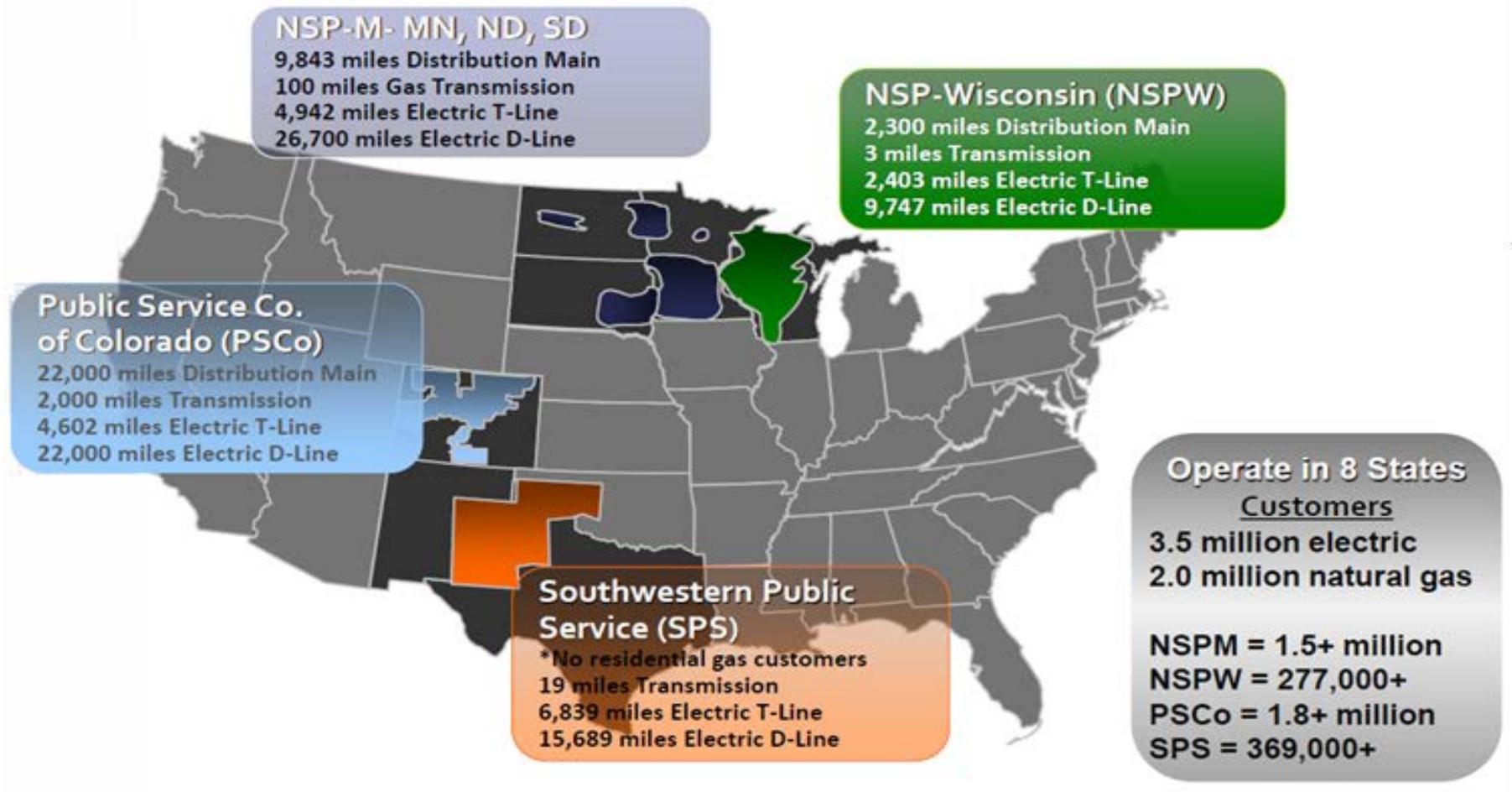
Diversity Trends



Local Spend Trends



Diverse Operating Areas



Unmanned Aircraft Systems

Xcel Energy views Unmanned Aircraft Systems (UAS) technology as transformational and believes it will redefine traditional working methods.

- Started experimenting with UAS technology in 2013
- Developed a small internal UAS team in 2014
- Researched various UAS technologies and capabilities
- Shared vision with our internal stakeholders and federal legislators
- Partnered with several organizations including EEI, EPRI, NPTS & more

Summer of 2015

- Mission planning and mission execution began...

Mission Completed

August 2015 – February 2016

Completed missions in 2015-2016

- Data collection at five energized substations
- Transmission line inspections
- Volumetric survey of ash storage facility
- Wind turbine blade inspection
- Transmission high pressure gas pipeline and leak detection
- Distribution gas pipeline bridge inspections



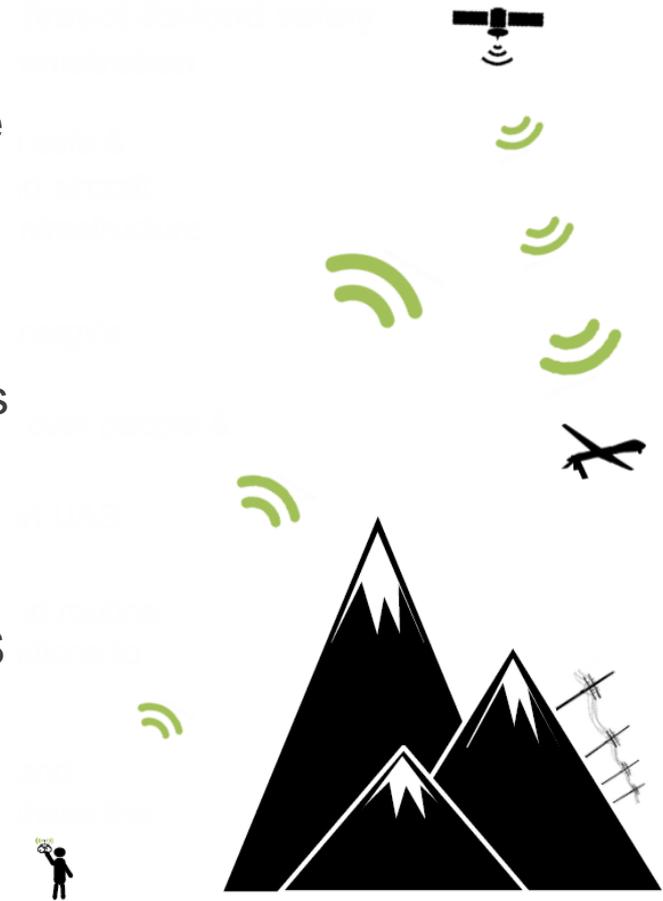
Transmission Line Inspection

January 2016 – Xcel Energy entered into safety partnership with the Federal Aviation Administration

The vision is to work together to facilitate the safe & routine BVLOS operation of UAS systems technology related to critical utility infrastructure.

Goals included:

- Inspect more than 20,000 miles of Xcel Energy’s transmission lines
- Examine ways to enable safe UAS flights over people and roads
- Research communication needs to support UAS BVLOS operations
- Help shape future FAA policies for safe and routine BVLOS operations to inspect the utility grid



POST STORM ASSESSMENT

Xcel Energy partnered with North Dakota stakeholders and submitted a \$1M + joint grant proposal

August 2016 – August 2017

Project Objectives:

- Assess high/low altitude UAS capabilities to enhance post-event damage and restoration efforts
- Apply UAS capabilities to support reconnaissance/restoration functions for electric distribution infrastructure
- Develop a UAS Natural Disaster strategy in collaboration with emergency management
- Assess feasibility of utilizing UAS for post-event reconnaissance and restoration activities



Advanced Grid Infrastructure

- Reliability
 - Receive real-time information from line sensors
 - Intelligent substations and communication devices will proactively prevent and respond to grid issues
- Outages
 - System outage alerts help operators pinpoint where problem occurred, improving restoration times
 - Smart grid devices perform automated switching, minimizing number of affected customers while linemen work on impacted power line
- Billing
 - Customers access energy usage next day, reducing need to estimate bills, allowing customers service to be remotely connected/disconnected
- Customer Choice
 - Advanced Grid opens door for more energy-related products and services including rate design choices and cost-savings programs

Cyber Security

- Xcel Energy identified over 500,000 individual cyber attack on its network in 2016
- Our system is monitored 24/7 by dedicated team of cyber analysts
- Our control system is separated and protected from the internet
- We act immediately on actionable threat intelligence from government and private sources
- Xcel Energy performs third party penetration testing of the network to test the effectiveness of our defenses

Renewables

- Current Portfolio
 - Wind – 6,676 MW
 - Solar – 615 MW
 - Hydro – 378 MW
 - Biomass – 189 MW
 - Landfill – 107 MW

- Upcoming Renewable Additions
 - Wind
 - Colorado – 600 MW
 - Minnesota/Dakotas – 750 MW
 - Texas/New Mexico – 1,230 MW

